

**PERBEDAAN PENGARUH OBAT KUMUR BERALKOHOL DAN OBAT  
KUMUR POVIDON IODINE 1% TERHADAP PEMBENTUKAN  
BIOFILM BAKTERI *Streptococcus sanguinis* ATCC 10556  
(Kajian In Vitro)**

**ABSTRAK**

Penelitian ini bertujuan untuk mengetahui perbedaan pengaruh obat kumur beralkohol dan obat kumur *povidone iodine* terhadap pembentukan biofilm bakteri *Streptococcus sanguinis*. Penelitian ini merupakan jenis penelitian eksperimental laboratoris (in vitro), dengan variabel pengaruh yaitu obat kumur beralkohol dan obat kumur *povidone iodine* 1% sedangkan variabel terpengaruh yaitu pembentukan massa biofilm bakteri *S. sanguinis*. Subjek dalam penelitian ini adalah biofilm bakteri *S. sanguinis* yang diperoleh dari Laboratorium Riset Terpadu FKG UGM. Tahap penelitian terdiri atas uji Konsentrasi Hambat Minimum (KHM) dan uji massa biofilm menggunakan metode *microplate assay*.

Hasil penelitian menunjukkan bahwa KHM *povidone iodine* adalah 12,5% dan uji *One-Way ANOVA* menunjukkan tidak ada perbedaan yang signifikan antara pengaruh obat kumur klorheksidin dan povidone iodine dalam penghambatan pembentukan biofilm bakteri *S. sanguinis*. *Povidone iodine* 12,5% dapat menghambat pertumbuhan dan pembentukan biofilm bakteri *S. sanguinis*. Dapat disimpulkan bahwa tidak ada perbedaan yang signifikan antara pengaruh obat kumur klorheksidin dan *povidone iodine* dalam penghambatan pembentukan biofilm bakteri *Streptococcus sanguinis* ATCC 10556.

Kata Kunci: Biofilm, Obat Kumur, *Povidone Iodine*, *Streptococcus sanguinis*

**DIFFERENCE BETWEEN EFFECTS OF ALCOHOL-BASED  
MOUTHWASH AND 1% POVIDONE IODINE MOUTHWASH ON THE  
FORMATION OF *Streptococcus sanguinis* ATCC 10556 BIOFILM  
(In Vitro Study)**

**ABSTRACT**

The objective of this study is to differ the effect between alcohol mouthwash and povidone iodine mouthwash on the formation of the bacterial biofilm of *Streptococcus sanguinis*. The method used is experimental in vitro laboratory research with the influence variable being alcohol mouthwash and 1% povidone iodine mouthwash, while the affected variable is the formation of the biofilm mass of the bacteria *S. sanguinis*. The subject of this study is the bacterial biofilm of *S. sanguinis* ATCC 10556 which is obtained from the Integrated Research Laboratory of FKG UGM. This study compared the effectiveness of povidone iodine and chlorhexidine on the inhibition of biofilm formation of bacteria *S. sanguinis*. The step of this research consisted of Minimum Inhibitory Concentration test and biofilm mass test with microplate assay method.

The results showed that the MIC of povidone iodine is 12,5% and One-Way ANOVA test showed there was no significant difference between the effect of chlorhexidine mouthwash and povidone iodine in inhibiting the formation of the bacterial biofilm in *S. sanguinis*. Povidone iodine 12.5% could inhibit the growth and biofilm formation of *S. sanguinis* bacteria. It was concluded that there is no significant difference between the effect of chlorhexidine mouthwash and povidone iodine in inhibiting the biofilm formation of *Streptococcus sanguinis* ATCC 10556 bacteria.

Keywords: Biofilm, Mouthwash, *Povidone Iodine*, *Streptococcus sanguinis*